No. 848,957. PATENTED APR. 2, 1907.

G. BLESS.

PIANOFORTE.

APPLICATION FILED APR. 14, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

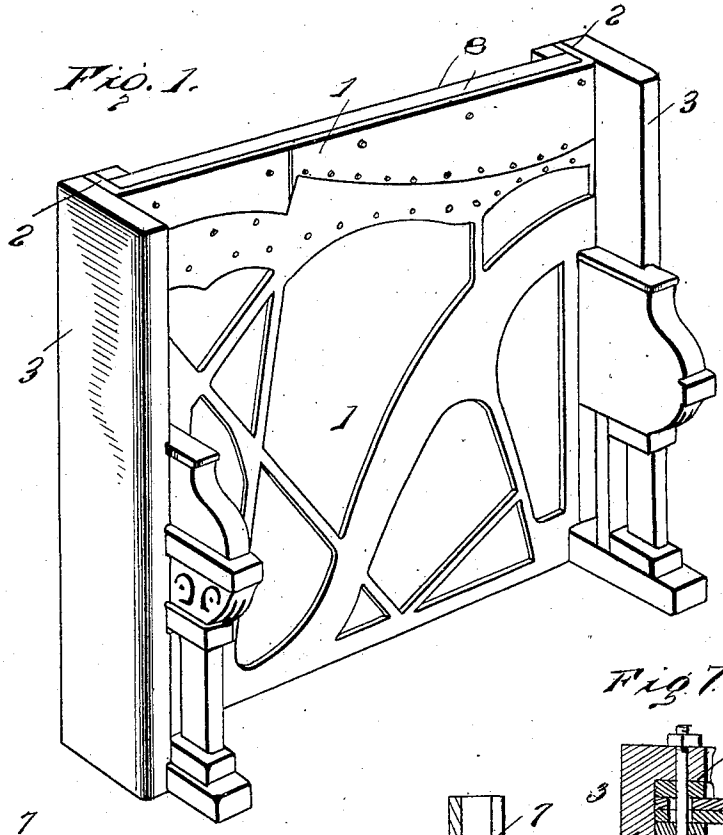


Fig. 7.

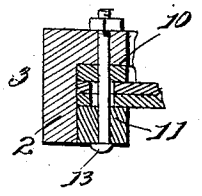


Fig. 4.

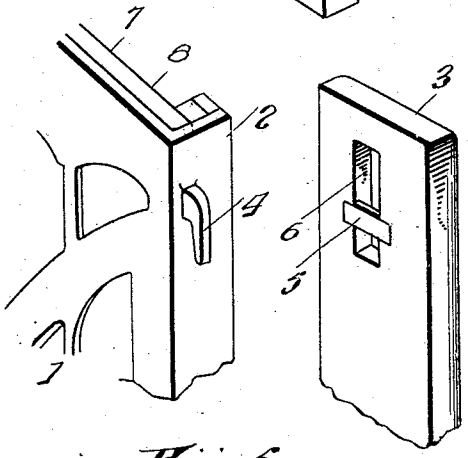
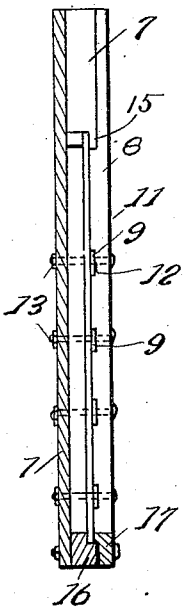


Fig. 5.



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2 SHEETS—SHEET 2.

Fig. 2.

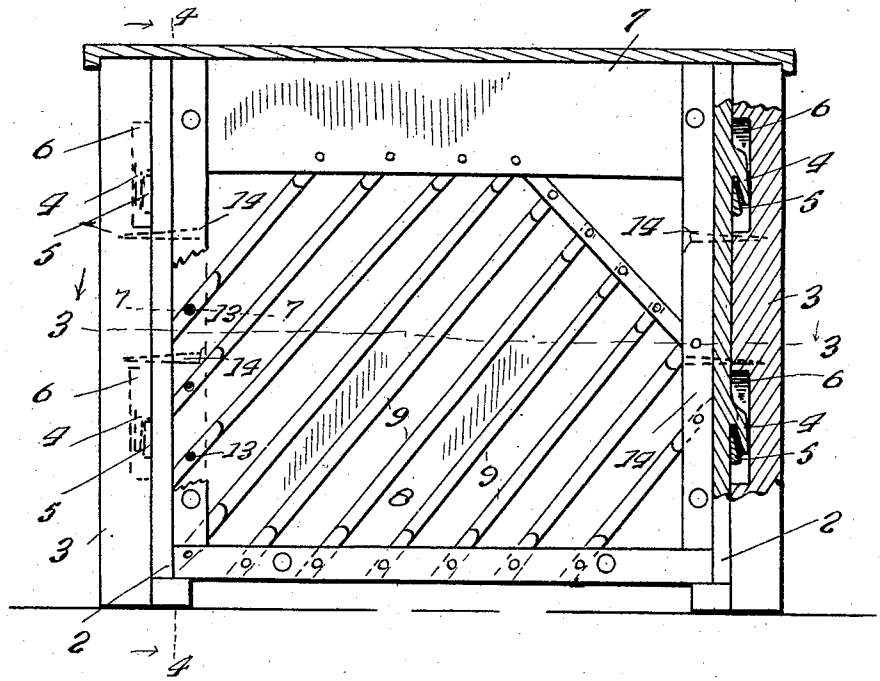


Fig. 3.

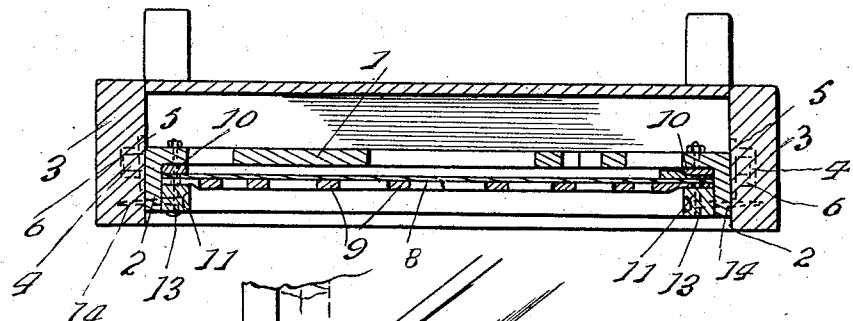
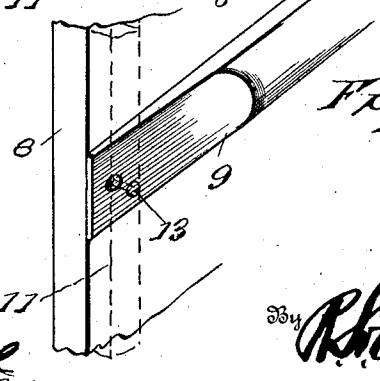


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

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PIANOFORTE.

No. 848,957. Specification of Letters Patent. Patented April 2, 1907.

Application filed April 14, 1906. Serial No. 311,721.

To all whom it may concern:

Be it known that I, GEORGE BLESS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Pianofortes, of which the following is a specification.

This invention appertains to pianofortes of the upright type, and has for its object to improve the structure of the frame and the connecting means between said frame, the case, and the sounding-board, whereby the latter is free to contract and expand without affecting the general structure or tone quality of the instrument to any appreciable extent, and whereby the depth of the case may be materially reduced and the accustomed wooden back dispensed with, with the result that the cost of construction of the instrument is materially lessened and the space occupied thereby reduced, and at the same time requiring less material and labor.

A further purpose of the invention is to provide for ready removal of the sounding-board and string frame or plate, either for repairs or for tuning, the construction being such as to obviate the removal of fastenings, and thereby avoiding the chances of marring the finish of the case.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a pianoforte-case embodying the invention, the top and front thereof, together with the action, being removed. Fig. 2 is a rear view of the case, parts being broken away to show more clearly the relative arrangement of the coöperating means. Fig. 3 is a horizontal section on the line 3 3 of Fig. 2. Fig. 4 is a vertical transverse section on the line 4 4 of Fig. 2 looking in the direction of the arrows. Fig. 5 is a detail perspective view of a portion of a side of the case and the string frame or plate, the parts being separated to show more clearly the hook and coöperating cross-piece. Fig. 6 is a detail perspective view of a portion of the sounding-board and strips between which the same is clamped. Fig. 7 is a horizontal section of a portion of the sounding-board, frame, and inner and outer cleats on the line 7 7 of Fig. 2, showing the parts on a larger scale.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The string frame or plate 1 is provided at its vertical edges with flanges 2, which preferably extend outward or rearward and are adapted to obtain an extended bearing against the inner faces of the vertical sides 3 of the case. Hooks 4 are provided at intervals in the length of the flanges 2, preferably near the upper and lower ends thereof, and are adapted to engage cross-pieces 5 let into the inner faces of the sides 3. Recesses 6 are provided in the sides 3 to afford ample clearance for the hooks 4 when placing the parts in position or when separating them. The inner faces of the hooks 4 are inclined and constantly exert an inward-drawing action upon the sides 3, so as to hold them close against the flanges 2. The tuning-pin block 7 is rabbeted at its lower edge to receive the upper edge of the sounding-board 8 and is secured to the string frame or plate 1 in the usual way.

The sounding-board 8 is strengthened by means of ribs 9, glued thereto in the accustomed manner and having a diagonal arrangement. Cleats 10 are applied to the vertical edges of the sounding-board and constitute the inner lining. Other cleats 11 are likewise applied to the vertical edges of the sounding-board and constitute the outer lining, and their upper ends are extended so as to overlap the end portions of the tuning-pin block. Notches 12 are formed in the cleats 11 to receive the ends of the ribs 9. The inner cleats or lining 10 are secured to the vertical edges of the string frame or plate by means of bolts 13, the same passing through the outer cleats or lining 11, and which cleats 11 are made fast to the sides 3 of the case by lag-screws 14, the same passing through the flanges 2 of the string-frame plate 1. The vertical edges of the sounding-board are clamped between the cleats or lining 10 and 11, hence are adapted to move to compensate for contraction and expansion without affecting either the sounding-board

or the case of the instrument. The upper edge of the sounding-board is confined between the string frame or plate 1 and the flange 15 at the lower edge of the tuning-pin block 7, formed by rabbeting the same. The lower edge of the sounding-board is clamped between strips 16 and 17, which are secured by bolts or otherwise to the lower portion of the string frame or plate 1. The openings in the edge portions of the sounding-board through which the several bolts or fastenings pass are elongated or enlarged to an extent to admit of movement resulting from contraction and expansion.

Having thus described the invention, what is claimed as new is—

1. In a pianoforte, the combination of side pieces provided with cross-pieces, and a string frame or plate having hooks at its vertical edges to engage with said cross-pieces to hold the parts when assembled.

2. In a pianoforte, the combination of vertical side pieces provided with recesses and cross-pieces upon their inner faces, and a string frame or plate having flanges at its vertical edges and hooks extended outward from the flanged edges to engage with the said cross-pieces of the vertical sides.

3. In a pianoforte, the combination of the case, a sounding-board, and connecting means between the case and sounding-board which admit of movement of the latter incident to contraction and expansion without straining or affecting the case.

4. In a pianoforte, the combination of the case, a support for the sounding-board connected to said case, a sounding-board, and means for securing the sounding-board to its support so as to admit of movement of the sounding-board incident to contraction and expansion without straining or affecting the case or the sounding-board support.

5. In a pianoforte, the combination of a case, a string-frame having flanges at its edges, positive interlocking means between the string-frame and case, inner and outer linings, positive connecting means between the outer lining and the flanges of the string-frame, a sounding-board having its edge portions arranged between the two linings, and connecting means between the linings and string-frame and clamping the sounding-board between the linings without interfering with its movements incident to contraction and expansion.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE BLESS. [L. S.]

Witnesses:
GEO. H. MORAND,
E. H. GRAHAM.